

## CHOMSKY'S LINGUISTICS : Truths and Misconceptions

著者	Lehner David
雑誌名	英米文学
号	3
ページ	43-80
発行年	1991-12-03
URL	<a href="http://id.nii.ac.jp/1084/00000951/">http://id.nii.ac.jp/1084/00000951/</a>

# CHOMSKY'S LINGUISTICS

## Truths and Misconceptions

By

DAVID LEHNER

The work of Avram Noam Chomsky in the field of linguistics has been both condemned and applauded. Condemned by those who believe that his work avoids a large number of areas that arguably demand attention; and applauded by others who see that his contributions have a significant impact on the study of language acquisition. This paper will attempt to clarify exactly what Chomsky hopes to do in his research. It will give a description of what Chomsky's linguistics really is and, perhaps more importantly, what it really isn't. Throughout our discussion here, various, common misconceptions about Chomsky's research will be highlighted in an attempt to impart to the reader a sound basis of understanding with respect to the views he holds with regard to the origin, knowledge of and use of language. Armed with such an understanding, the reader will be in a much sounder position for an accurate assessment of Chomsky's work.

### I

Undoubtedly, many people find Chomsky to be enigmatic. The intellectual prowess that he possesses places him at the apex of the exceedingly complex realm of studies dealing with the cognitive domain. Indeed, it is no understatement to agree with those who acclaim his work to be comparable with that of Keynes or Freud in terms of its depth, scope and sheer remarkableness.

However, it is also perhaps true that no scholar has been more often misunderstood and misrepresented. In order to understand what Chomsky is advocating it is first necessary to examine his work as a consistent effort to transform linguistics into a science in the true sense of the word. However, not all forms of linguistics are 'sciences' to the mind of Chomsky. In fact, there are some forms that he doesn't consider as being truly scientific. To Chomsky, linguistics is the study of language-not the use of it or the search for solutions to the complex problems that language users face. Linguistics can only be a true science if it goes beyond the mere classification genre of its structural and historical veins which Chomsky views as only performing a classification and categorization task of linguistic phenomena.

In order for linguistics to be a true science Chomsky argues that certain questions must be asked and answers must be supplied. In the mid-fifties he proposed a different road for the study of linguistics.

This new approach is best exemplified by the following:

1. a rejection of the view that linguistics is a field that services other fields by providing a classification and terminology to talk about language.
2. an emphasis on similarities between languages not the differences.
3. a focus on well-studied languages like English rather than languages from far afield.

(Adapted from Salkie, 1990:12).

With respect to the first point above, Chomsky is referring to the kinds of questions that HE feels are worth asking about language. The other two points refer to the types of answers that he eventually offered to these questions.

For Chomsky, the study of linguistics, up until he entered the scene, was largely concerned with 'mere' classification. He likened

it to natural history or 'butterfly collecting'. This is all well and good in one respect and for some scholars. However, for Chomsky it doesn't matter how diligently or well people collect linguistic specimens. In the end, all they are really doing is describing, with varying degrees of success, the way that things are. Chomsky believes that linguistics must go farther and attempt to explain 'why' things are the way they are. Only this kind of approach can rightly be considered 'scientific'. Chomsky maintains that science is the solving of riddles and that a scientist's achievements are evaluated in terms of the complexity and importance of the puzzles tackled and to what degree the proposed solutions are successful in an explanatory way.

In order to fathom Chomsky's zealous, scientific approach towards the study of linguistics it is essential that one realize that he has taken physics as his model for study purposes. Indeed, he has made frequent references to the study of physics in reply to attacks made upon his methodology over the years. The entire history of the development of physics into a science, from the views of Aristotle, through the work of Copernicus, Galileo and Newton, ultimately to modern-day quantum theory will obviously not be discussed here. However, a few points are germane to the relationship between the study of physics and the way in which Chomsky approaches the study of linguistics. It is to that discussion that we shall now turn.

In essence, the previous orthodoxy of physics was built upon the work of Aristotle. His views were eventually dismantled through the subsequent work of those who followed him. However, although Aristotle was ultimately wrong, this in no way detracts from his contributions for the development of that science. Surely, they were instrumental in directing subsequent investigations. This is precisely how Chomsky views the classification and categorization

work done by structural and historical linguists. He does not contend that they are wrong or that their work has not contributed to our present-day understanding of linguistics. Simply put, Chomsky maintains that it is time to move on past mere description towards the realm of explanation. Such a progression, needless to say, requires a narrow scope of inquiry and this is exactly what Chomsky is attempting to accomplish in his work—narrow the scope. While this may be attacked as an incomplete approach, Chomsky believes (as did Galileo and Newton—who also narrowed the scope of their investigations) that the increased insight and unity in a more limited area will more than compensate for the disadvantage of a narrower scope of theory. This is why Chomsky restricts himself to the study of First Language Acquisition. This in no way implies that Second Language Acquisition is of no interest to him. It simply represents his view that research done in one restricted area (English L1 Acquisition) will more than compensate for a lack of work done in other areas of linguistic inquiry. Chomsky has chosen First Language Acquisition and only certain parts of that field with respect to English. Work in other areas of linguistic inquiry he leaves to other scholars,

Consequently, the rationale motives behind Chomsky's work can be summarized as follows:

1. The conviction that explanation is more important than just describing and classifying a wide range of data.
2. The willingness to narrow data which one is attempting to explain and to put off, for the time being, those problems that cannot be solved at this time.
3. Abstraction and idealization using concepts and principles often remote from everyday experience.
4. The recognition that being proved wrong does not devalue a scientist's contributions.

(Salkie, 1990:17)

Chomsky is very impressed with the style of research done with respect to physics. He was especially influenced by Galileo's contributions to that field as well as his 'open-minded' approach to problems as they developed-especially those with no discernable solution at one certain time. Indeed, the very focus and essence of Chomsky's work deals with the question of: '...to what extent and in what ways can inquiry in something like the 'Galilean Style' yield insight and understanding of the roots of human nature in the cognitive domain'? (Chomsky, 1980:10)

Chomsky is advocating the application of the 'Galilean Style' of inquiry to the study of language. At no time has Chomsky said that this is the only way to investigate language. Rather, this is the approach that interests him. Chomsky has unfailingly emphasized that idealization and abstraction as well as the narrowing of the scope of inquiry are absolutely essential. He is also content to leave unresolved problems unanswered, confident that solutions will come with more study 'if' his theory is reasonably successful enough in a limited area.

Chomsky explicates on his application of the 'Galilean Style' of inquiry for the study of language as follows:

'A person who speaks a language has developed a certain system of knowledge, represented somehow in the mind and, ultimately, in the brain in some physical configuration. In pursuing an inquiry into these topics, then, we face a series of questions. Among them:

1. What is the system of knowledge? What is in the mind/brain of the speaker of Spanish or Japanese?
2. How does this system of knowledge arise in the mind/brain?
3. How is this knowledge put to use in speech (or secondary systems such as writing)?
4. What are the physical mechanisms that serve as the material basis for this system of knowledge and for the use of this

knowledge?

(Chomsky, 1988:3)

The first three questions fall under the rubric of linguistics and psychology while the fourth one is a relatively new question that has yet to be researched to the extent that the other three have.

Chomsky contends that the answer to the first question is that a particular generative grammar exists and this theory deals with the state of the mind/brain of the person who knows a particular language. The second question's answer is supplied by a specification of Universal Grammar (UG) which includes the ways in which its principles interact with world experiences to produce a certain language. For Chomsky, UG represents the 'initial state' of the language faculty prior to any experience of a linguistic nature. The answer to the third question revolves around how knowledge attained enters into the expression of thought and understanding of language encountered both in everyday interactions and special uses of language. (More about which will be said later).

The above section indicates that Chomsky has moved away from mere classification of linguistic phenomena in one sense. He is not interested in describing certain samples of spoken or written language. What he is interested in is the system of knowledge inside the mind/brain of the speakers of languages that imparts a complete understanding of their first language. This he calls generative grammar-which means that the grammar system theory must possess complete explanatory power. It cannot assume, either implicitly or explicitly, anything about language. All points must be explained within the grammar and no corners can be cut.

The manner in which Chomsky employs the terms mind and brain must be understood. It is obvious that the brain is a physical object and as such it can be studied like any other physical object.

The mind, however, represents the mental realm of thought. Its characteristics are completely different from those of the brain because it does not have any physical realization. For Chomsky, however, 'mind' and 'brain' are equal in an abstract sense. He contends that by studying behavior we can create theories as to what is going on in the minds of our subjects. Chomsky argues that if rules can be proven to exist in the 'minds' of speakers then they must assume some sort of physical form in their 'brains'. Consequently, Chomsky employs the terms 'mind' and 'brain' to talk about the same thing in two different ways.

Chomsky, as noted above, prefers to concentrate on well-studied languages like English. The reason for this is clear: A generative grammar must be explicit and detailed. The explicitness and detail can more easily come from languages that have been extensively studied in the 'classification' sense than from those not as well categorized. Also, one should do work in his native language when looking for explanatory power because linguists who try to learn and describe languages other than their own native tongues may produce useful descriptive material but generative grammar is aspiring to a much higher level of description.

The preceding section makes it clear that we are still dealing with description but at a far higher level of complexity. Therefore, the jump from 'mere' classification and description to explanation comes in Chomsky's second question: How does this system of knowledge arise in the mind/brain?

This inquiry beals with, in lay-man's terms': 'how do people learn their native language?' Chomsky believes that an unjustified assumption has been made consistently with regard to this most basic and yet most difficult of questions. Namely, that 'learning' is the only thing involved. He contends that it is indeed possible that human beings are somehow biologically predisposed to learn a



language. This predisposition is transmitted by our genes. The fact that only humans have anything even remotely resembling language strongly implies that genetic factors play a part—although how important this role is can only be answered by investigations of real linguistic evidence.

As the learning of one's first language is different from that of learning subsequent ones, linguists often talk in terms of 'acquiring' first languages and 'learning' second languages. Learning a second language requires conscious acquisition of skills and absorption of new information. The process is painstakingly difficult. First language acquisition, on the other hand, occurs with little or no explicit instruction.

One point must now be made clear: Chomsky has not contributed directly to the research done with respect to L1/L2 acquisition/learning differences. His own work has been limited to answering question number one and the first half of his proposed answer to question number two: 'a specification of universal grammar'; as for the second half of question number two, 'an account of the ways in which UG interacts with experience to yield a particular language', he has been content to leave that to other scholars. The logical sequence here is obvious: one first is required to begin to describe a system of knowledge (question one) before it is possible to ask how it is acquired. In other words, one has to first know, to some extent, what exactly is being acquired. Also one must make sure of some proposals about the initial state of the language faculty (the first half of question number two) before looking at how it develops and interacts with experience. This does not, however, mean that a complete knowledge of the linguistic system is required before one can inquire into its acquisition. Research on acquisition can influence the ideas about the nature of what is acquired. Chomsky views his work as the preparation for

a successful theory of L1 acquisition even if his contributions to the field are often indirect.

Chomsky has proposed the existence of what he calls the 'language faculty' which represents one part of the human biological makeup and is designed exclusively for language acquisition. To supply an answer to question number two, it is necessary to, first of all, specify what is contained in this faculty at birth (the initial stage) and then to describe the contribution that learning makes in its subsequent development to the 'steady state' of a mature, speaker/hearer of any given language.

The initial state of the language faculty is referred to as Universal Grammar (UG). At this point in time we have no direct evidence about the state of the language faculty at birth. This does not mean, however, that we are only left with uninformed speculations about its makeup. The reason for this is that if we have an explicit, generative grammar of at least one language and if it can be demonstrated that only parts of that grammar were learned it follows that whatever is left over must be a part of UG or the human biological framework inherent in all humans for the acquisition of a language. Consequently, UG enables the move from description to explanation.

This brings us back to what was mentioned previously about Chomsky's emphasis upon language similarities rather than their differences. 'Universal' means exactly what it implies: if a genetic element of significant proportions does indeed exist with respect to language acquisition, then it must be common to all humans as there is absolutely no evidence to suggest that any particular people (e. g. race) are more or less predisposed to learn one language than others. Given this fact, it follows that interest in the genetic element requires a concentration upon features common to all languages as its first vital step.

The question of how language is put to use is noteworthy with respect to Chomsky in that the assumptions which underline the question are more interesting and far-reaching than the actual solutions he presently proposes. Chomsky maintains a distinction between the knowledge of language and the other psychological mechanisms involved in its use and the physical skills which are required to produce and understand language. For example, memory is another psychological/mental mechanism that is important for language but it is, nevertheless, distinct from it. It is utilized for other purposes than merely the storage of words and their meanings.

Physical skills, such as the ability to move one's tongue, mouth and vocal cords and the ability to hear and distinguish between different sounds are crucial to the ordinary use of language. They are not, however, specific to language as we utilize the same organs for whistling, eating and distinguishing between sounds of a non-linguistic variety. Such skills may deteriorate because of disease or injury but the language faculty itself remains intact. Thus, Chomsky argues that it is necessary to make a distinction the language faculty as a unique part of the mind and ultimately, the brain.

Chomsky also contends that communication is just one of the uses of language. Many other people, linguists and laymen alike, would strongly disagree with him on this contention. To them, the whole purpose of language is to communicate. Chomsky addresses this stance as follows:

What is the purpose of language? It is frequently alleged that the function of language is communication, that its 'essential purpose' is to enable people to communicate with each other. It is further alleged that only by attending to its essential purpose can we make any sense of the nature of language.

It is not easy to evaluate this contention. What does it mean to say that language has an 'essential purpose'? Suppose that

in the quiet of my study I think about a problem, using language, and even write down what I think. Suppose that someone speaks honestly, merely out of a sense of integrity, fully aware that his audience will refuse to comprehend or even consider what he is saying. Consider informal conversation conducted for the sole purpose of maintaining friendly relations, with no particular concern as to its content. Are these examples of 'communication' in the absence of an audience, or with an audience assumed to be completely unresponsive, or with no intention to convey information or modify belief or attitude?

It seems that either we must deprive the notion of 'communication' of all significance, or else we must reject the view that the purpose of language is communication. While it is quite commonly argued that the purpose of language is communication and that it is pointless to study language apart from its communicative function, there is no formulation of this belief, to my knowledge, from which any substantive proposals have followed. (Chomsky, 1986:226-230)

Chomsky is not advocating the view that the study of language and communication is impossible or uninteresting. As he notes above, communication is 'one' of the functions of language but certainly not the only one, nor necessarily the most important. What he is doing is defending himself against the often raised complaint that his type of linguistics is pointless because it does not regard communication as the central theme. Chomsky has been bitterly attacked for this belief and often the attacks against him are quite irrational. He has had to, time and again, defend the integrity of his approach. In essence, Chomsky contends that 'if' one strives to achieve the type of profound and complex theories in linguistics that have been so prominent in physics, then his approach gives the best hope for success. Indeed, his only purpose is to counter those who would contend that their approach (usually communicative) is the ONLY correct one.

## II

Just what exactly is Chomsky's linguistics? In this section an attempt will be made to examine this question in order to provide a clearer answer with reference to four other, related but ultimately distinct, linguistic concerns: generative-grammar, Chomskyan linguistics, radical Chomsky-like linguistics and transformational grammar. Boundaries will be drawn through the use of five fundamental conceptual distinctions.

Chomsky's linguistics clearly represents a form of generative grammar which is defined as being perfectly explicit as a description for a particular human language. Chomsky himself defines a generative grammar as one that '...does not rely on the intelligence of the understanding reader but rather provides an explicit analysis...' (Chomsky, 1965:4).

Chomsky had initially proposed that for a grammar to be explicit in the most finely tuned sense of the word, it had to take the form of a system of formalized rules and various other sorts of devices that would mechanically generate/explain ALL of the grammatically correct sentences of a language—each of which would be assigned an appropriate structural description. Any approach to the study of language which does not offer explicitness in terms of explanation is referred to as non-generative.

The more explicit a grammar is the more precise will be its conclusions and hence the easier it will be to check for false claims, inconsistencies, gaps and lacunae, unjustified hidden assumptions and etc. Thus, generative grammar differs from its non-generative brother, not in what is claimed about natural languages but rather 'how' the claims are expressed. In short, the difference is not one of linguistic content per se; the difference is one of metascientific format. Consequently, it is possible for two approaches to the study

of language to differ greatly as to what they claim (e. g. structure) but both can be generative in the sense that they both strictly utilize the criterion of explicitness. Many critics of Chomsky have attacked his grammatical theory by carelessly conflating 'generative' with "produce" and take a grammar to be the model of the speaker. This is not what Chomsky is implying and the reasons why this is so will become clear as we progress in our discussion here.

There is a second conceptual distinction to be made when searching for Chomsky's linguistics, namely that, with generative grammar theory, a differentiation has to be made between the Chomskyan approach and various non-Chomskyan approaches. This distinction shows that there are differing conceptions of the basic aim, guiding questions and the fundamental problem within the study of language. Chomsky's primary aim is mentalistic. He seeks to increase our understanding of the properties inherent within the human mind. His is an approach to deal with the basic nature of human cognition. Here, we must again return to discussions of the three questions raised in the first section of this paper.

The first question-what constitutes knowledge of language-is dealt with by Chomsky as follows: He considers a speaker's knowledge of his native language to be an abstract, complex system of rules (1980a:166). For many properties inherent in a mature speaker/hearer, there is no evidence that they were experienced in childhood. Yet, he/she has complete control over production and comprehension. This leads to question two-how does this knowledge (i. e. without evidence) come to develop? Chomsky (1987:7) has given this inquiry the status of 'the fundamental problem' of his approach to generative grammar. In order to solve this problem, it has to be explained how children are able to 'know' their native language on the basis of what Chomsky considers to be extremely limited linguistic evidence or experience with respect to the language

being acquired. Because knowledge is abstract in Chomsky's view, he considers the third question concerning use to be a case of rule-following or rule-governed behavior. This led him to the conclusion that human beings have a special innate mental faculty that insures language acquisition and he refers to it as the language faculty

By contrast, non-Chomskyan approaches to generative grammar look at the aim of language study as not being interested in gaining insight into the human mind. Such approaches do not pay any heed to the second question—one which Chomsky considers vital. These approaches are non-mentalistic and pursue non-psychological concerns about human language. Representative examples of this type of approach would be, for example, Jerrold Katz (1981) who has proposed that linguistic theory has to provide a description of a non-mental, abstract or Platonistic object 'language'; and Gerald Sanders (1980) and Michael Kac, who see language as being solely a cultural object with a non-mentalistic interpretation to linguistic theories.

The main point to be discerned here is that an approach to the study of language can be both generative and non-Chomskyan: generative in the sense that it adopts the requirement of being perfectly explicit and yet, non-Chomskyan in that its aim is not to increase our understanding of the human mind as exemplified by Chomsky's tireless pursuit of answers to the three questions.

The precise location of Chomsky's linguistics also must be determined by making a distinction between Chomskyan linguistics and Chomsky's linguistics. In short, this distinction is related to the fact that within Chomskyan generative grammar as a whole, Chomsky himself has his own conception of the structure of human language or linguistic structure while there are a number of linguists assembled under the 'Chomskyan linguistic' flag that differ with respect to what this conception of linguistic structure is. That is,

they disagree with Chomsky with respect to how the makeup of linguistic structure is to be viewed. This can perhaps best be exemplified with reference to the place assigned by Chomsky to transformations as rules of syntax. Chomsky has always maintained that transformations are basic to linguistic structure-although over the years his exact views on the nature of these rules have changed considerably. Numerous scholars have shared Chomsky's basic problem of linguistic inquiry being primal but have never shared his view that transformations were fundamental to linguistic structure. Two such scholars, Koster (1978a;1978b) and Freiden (1978) were practicing Chomskyan linguistics/Chomskyan generative grammar but through differing with him on the role and status of transformations, they were not really subscribing to 'Chomsky's' linguistics in its strictest, narrowest sense.

In sum, Chomsky's linguistics is, in actuality, the set of assumptions that Chomsky himself has about linguistic structure, at any particular time. Chomsky's linguistics has been developing continuously-through revision of assumptions-thus making his linguistics an ever-changing body of ideas over the years. Also be sure to note that some erstwhile followers of Chomsky's have been championing a position of views that represent a strong version of a view held by Chomsky in essence, but not to the same degree. Or, they may retain a basic assumption from Chomsky's earlier work but it is no longer endorsed by him. For example, generative semantics initially was made upon a variant of 'radical' Chomsky-like linguistics in that it assumed that the deep structure of a sentence was identical to its semantic representation (See Newmeyer, 1980). Or Katz's view that the semantic interpretation of a sentence does not have to refer to any level of syntactic structure other than deep structure-a view that Chomsky himself would take issue with. In short, make sure that it is Chomsky's linguistics that you are accepting or re-



jecting. Don't simply assume that Chomskyan linguistics represents Chomsky's linguistics as the two can vary dramatically despite their apparent similarities.

Another important point to be discussed here has to do with the distinctions that exist with reference to generative grammar and transformational grammar. Many people assume, wrongly, that these two are automatically co-existent. That is, if one mentions a generative grammar then the other may assume, mistakenly, that it includes transformations. This is not necessarily true although it is possible. The term generative grammar refers to a system that demonstrates (or attempts to demonstrate) total explicitness. This metascientific condition means that all grammatical sentences of a language are explicitly explained. On the other hand, a transformational grammar refers to a system that holds that transformations are essential to all natural languages. 'Generative vs. non-generative' represents a metascientific distinction and 'transformational vs. non-transformational' constitutes a substantive linguistic distinction. Thus, a 'transformational grammar' may be either generative or non-generative and a generative grammar may or may not employ transformational rules. In principle therefore, it is possible to have any of the following:

- Transformational-generative grammar
- Non-transformational-generative grammar
- Transformational-non-generative grammar
- Non-transformational-non-generative grammar

Chomsky's linguistics has always been both transformational and generative. In sum, Chomsky's basic stand on linguistics includes the following:

- It is generative in that it has the requirement of explicitness in all cases.
- It is Chomskyan in the sense that it is guided by the search for answers to questions about the nature, origin and use of knowledge

of language.

-It is transformational in that it considers transformations to be the basic units of linguistic structure.

Mistakes are commonly made by many generative grammarians and Chomskyan linguists with regard to terminology. For example, the term 'generative grammar' is often utilized (even by Chomsky himself) to refer to Chomskyan (generative) grammar. It is interesting to note Chomsky's own use of the term 'generative grammar' when discussing the distinction between 'theory' and 'topic,:

Generative grammar is sometimes referred to as a theory, advocated by this or that person. In fact, it is not a theory any more than chemistry is a theory. Generative grammar is a topic, which one may or may not choose to study. Of course, one can adapt a point of view from which chemistry disappears as a discipline (perhaps it is all done by angels with mirrors). In this sense, a decision to study chemistry does stake out a position on matters of fact. Similarly, one may agree that the topic of generative grammar does not exist, although it is hard to see how to make this position minimally possible.' (Chomsky, 1986: 4-5).

Botha argues that from the context in which the terms 'generative grammar' and 'the topic of generative grammar' are used in the above quotation, Chomsky is referring to the 'nature origin and use of language'. This represents, in the strictest sense, 'the topic' of Chomskyan linguistics. (Botha, 1989: 9-10). In short, when Chomsky utilizes the term 'generative grammar' he is sometimes referring to it in its narrowest sense (i. e. as having complete explanatory power) and sometimes he is using it to refer to the overall aim of Chomskyan linguistics. Consequently, when engaging in discussions of, or attacks upon, Chomsky's linguistics, one must be cognizant of what the terminology actually means and not be misled by 'short' statements concerned with the nature, concerns, aims, etc., of 'generative', Chomskyan linguistics, 'transformations' and etc.

### III

This section will attempt to illustrate, in as clear a manner as possible, what Chomsky believes are the answers to the questions put forward at the outset of our discussion. Namely:

1. What constitutes knowledge of language?
2. How is knowledge of language acquired?
3. How is knowledge of knowledge of language put to use?

In order to understand the essence of Chomsky's answers to these inquiries it is necessary to address a number of groupings of conceptual distinctions that he has utilized to clarify the following topics:

1. The 'fundamental' problem of language acquisition.
2. The nature of the linguistic experience involved in language acquisition.
3. The nature of the genetic basis of knowledge of language.
4. The nature of the process (es) that are used for the acquisition of language knowledge.
5. The nature of the acquired knowledge itself.
6. The nature of the rules and rule-following involved in the use of language.

#### THE PROBLEM OF LANGUAGE ACQUISITION

The first conceptual distinction to examine in this context has to do with the 'logical problem of language acquisition and the psychological problem of language acquisition'. What Chomsky refers to as the 'logical problem of language acquisition' deals with his question: 'How is it possible for children to acquire the complex, rich system that entails their knowledge of language when the evidence they have is insufficient and their experience is extremely limited? To the mind of Chomsky, the language knowledge that each person obtains with respect to his native tongue has a great many properties for

which there is no evidence within the speaker's linguistic experience. Yet, each person (barring physical or certain other psychological abnormalities) acquires complete 'knowledge' of them. Chomsky also refers to this as the 'problem of poverty or deficiency of the stimulus'.

The 'psychological problem of language acquisition', on the other hand, deals with the concept of 'real-time' acquisition: How does a child acquire language in stages over a period of time, with the earlier ones serving as the basis for the development of the later ones? Chomskyan linguistics does not attempt to deal with this inquiry except in relation to how it would presuppose an understanding of the logical problem of acquisition. During the 1960's Chomskyans introduced the concept of 'instantaneous language acquisition'. This was intended only to indicate that they were not (now) interested in the temporal intricacies of real-time acquisition. Chomsky and Halle (1968:331) argue their reasons for this stance as follows:

'...there is another, much more crucial, idealization implicit in this account. We have been describing the acquisition of language as if it were an instantaneous process. Obviously, this is not true. A more realistic model of language acquisition would consider the order in which primary linguistic data are used by the child and the effects of preliminary 'hypotheses' developed in the earlier stages of learning on the interpretation of new, often more complex data. To us it appears that this more realistic study is much too complex to be undertaken in any meaningful way today and that it will be far more fruitful to investigate in detail, as a first approximation, the idealized model outlined earlier, leaving refinements to a time when this idealization is better understood.'

Chomskyans have not changed these views in any essential aspect up to this point in time. In fact, Chomsky (1986:54) still strongly maintains that 'intermediate steps do not change the principles available for the interpretation of data at later stages in a way

that affects the state attained'.

It would be a mistake to take issue with Chomskyan linguists on the basis of their stance with respect to 'real-time' and the psychological problem of language acquisition because Chomskyans are interested only in the end product of language acquisition (at this time!). It is not their contention that intermediate stages are not involved or important, but rather they maintain that more can be gleaned from the study of the end-product at this point.

In order to clarify exactly what the logical problem of language acquisition entails, Chomsky cites a historico- philosophical point of view distinction: Plato's Problem vs. Orwell's Problem. The former is related to the explanation of how man knows so much in spite of the sparseness of available evidence; while the latter operates from the opposite side of the same proposition—namely, how can we understand and know so little even though we are surrounded by rich and plentiful evidence.

Plato's Problem directly relates to Chomsky's logical problem of language acquisition. Orwell's Problem, on the other hand, has led Chomsky (1986:xxvii) to postulate that 'we must discover the institutional and other factors that block insight and understanding in crucial areas of our lives and ask why they are effective,. Chomsky (1986:xxix) states that Plato's Problem is 'deep and intellectually exciting'. It is his contention that its solution requires the discovery of explanatory principles that enable one to make sense out of apparent chaos.

Chomsky has also presented a sharper formulation of the logical problem of language acquisition through a distinction between an innate component and an experiential one in language acquisition. This arises as a result of his view that language, which is a cognitive system, results from an interaction between a person's experience and his way of dealing with the experience. (See Chomsky, 1980a:

65ff; 1986:xxxv-vi). For Chomsky, the main, fundamental problem is to determine the makeup of the innate endowment which acts as a bridge for the gap between experience and knowledge that is attained. (1986:xxxv-vi). Chomsky's concept of the distinction between 'experience and innate endowment' deserves more scrutiny and will be dealt with as follows: The innate component accounts for the aspects of language, for which there are no pieces of evidence in the environment, but are nevertheless acquired by the child. In short, these aspects do not require 'learning' on the part of the child ('learning' in the conventional sense of the term). Chomsky contends that these 'innate' aspects of language knowledge are contained within the genetic program of all human beings in essentially the same manner. This 'innate language' forms the 'initial state' of a mental organ which Chomsky refers to as the 'language faculty' and its 'steady state' is the speaker's complete knowledge of the language. This provision for an innate factor means that Chomsky is advocating a 'nativist' element within his position on language acquisition.

The experiential component, on the other hand, is also important in that it allows for the role that the linguistic data available to the child play in the language acquisition process. According to Chomsky, this role is one of 'triggering' at various points in time, the activation of different parts of the genetic program which thus guide in its unfolding development. In essence then, Chomsky's solution to the logical problem of language acquisition is that, on the whole, knowledge of language is not learned by a process of trial and error, conditioning, abstraction, association and/or etc. Rather, it develops in the child by means of a process of biological growth. That is, any child is biologically determined to acquire a language over time.

Chomsky further provides that the child's linguistic 'environment' (i. e. experience) does not solely act as a 'trigger' for the activation

of language growth and development, but also performs the function of 'shaping' the language faculty. This 'shaping' function accounts for the fact that a child growing up in a certain linguistic environment (e. g. a Japanese environment) will pick up the specific properties of that language and not another. Chomsky illustrates this point (1980a:45) with reference to English:

'The environment provides the information that questions are formed by movement of a question word and that 'each other' is a reciprocal expression; in other languages this is not the case so that these cannot be properties of biological endowment in specific detail.'

In summary, Chomsky draws a distinction between 'triggering' and 'shaping' with reference to the functions of the child's linguistic experience and environment in language acquisition.

### THE NATURE OF THE LINGUISTIC EVIDENCE

Chomsky's nativistic solution to the logical problem of language acquisition hinges completely on the poverty of the experience factor. For if the child's linguistic experience were not as poor as he contends it to be, then his entire solution would collapse. In order to support his claim that the data available to a child for language development is lacking, Chomsky raises two points: the poverty of the stimulus and the degeneracy of the stimulus. Which, contrary to the understanding of many, are not the same.

Chomsky contends that the stimulus is degenerate in that the data base for language acquisition contains a multitude of expressions that are not well formed. For example, slips of the tongue, false starts, incomplete utterances, excessive pauses and endings that do not match their beginnings, and etc. The stimulus is impoverished or degenerate, on the other hand, in that it contains absolutely no evidence at all for certain properties and principles of the grammars of language acquisition for children. The main point here is that

Chomsky's genetic component solution to the logical problem of language acquisition is based upon the poverty of the stimulus and NOT on the degeneracy of the stimulus. This poverty of the stimulus notion is exemplified well by Chomsky himself (1986:7-8):

- (1) I wonder who [the men expected to see them]
- (2) [The men expected to see them]

The interpretations of these two sentences—specifically, the clause 'the men expected to see them', are quite different. In (1) the pronoun 'them' can be interpreted to refer to 'the men'; in (2) this pronoun cannot correctly be understood by 'situational or discourse context' to refer to 'the men' (Chomsky). However, these facts about the interpretation of (1) and (2) are known without relevant experience to differentiate the cases. For Chomsky this exemplifies the fact that the stimulus is impoverished because it contains no evidence for the principle which the child would have to acquire in order to interpret (1) and (2) correctly.

Attacks have been made upon Chomsky with regard to 'degeneracy and poverty', especially by psychologists and psycholinguists. Most often they use the argument that mother-child interaction study data show that the stimulus is not degenerate. However, as noted above, the essence of Chomsky's idea in this situation is based on poverty not degeneracy and there is hardly any disputing to be done on this point.

Another point that Chomsky raises is related to 'motherese' and/or 'caretaker speech' in relation to the actual data base utilized by children for language acquisition. Chomsky argues (1980b) that no evidence exists that the simplified data offered to the child in the form of 'motherese' is in actuality the basis on which children acquire language. He also contends that some evidence does exist which shows that 'motherese' language data could actually make language acquisition more difficult. Through the avoidance of



seemingly complex grammatical constructions, 'motherese' may negatively affect the data base for language acquisition and may hamper the acquisition of so-called complex grammatical constructions.

Chomsky has also mentioned a further distinction as food for thought here. That is, the distinction between the data available to the child learning a language and the data available to the linguist studying the same language. Chomsky maintains that the data available to a child acquiring language is more limited than the data available to the linguist studying language. This is because, he argues, the linguist can systematically study the ambiguity and paraphrases as well as the element of ungrammaticality. On the contrary, the child is thought to lack similar access to information about ambiguous, synonymous or ungrammatical sentences. Consequently, the child is thought to only have access to sentences and pseudo-sentences within appropriate contexts. Such sentences, in such contexts, therefore, constitute 'primary linguistic data'. As a result, Chomskyans claim that the child cannot be taken to be a 'little linguist'.

### **THE GENETIC COMPONENT IN THE ACQUISITION OF KNOWLEDGE OF LANGUAGE**

Chomsky makes a fundamental distinction between the 'initial state' and the '(relatively) stable state' of the language faculty (1980a; 1986). It is the initial stable state that Chomsky contends is 'genetically determined'. In its initial state in a child, the language faculty is devoid of any linguistic experience. Through the 'triggering' influence of such linguistic experiences the initial state—also referred to as Universal Grammar (UG) or the Language Acquisition Device (LAD) develops and through a number of intermediate steps becomes the (relatively) stable state which Chomsky calls 'the attained state'. This stable state of the language faculty is referred

to as an organism's 'knowledge of language' or 'the speaker's mental grammar'. The initial state (i. e. UG or LAD) is what leads the way along the linguistic exposure path to the stable state.

Botha (1989:26) lists the following pairs of expressions that reflect the fundamental distinctions between the 'initial state' and the '(relatively) stable state':

INITIAL STATE	STABLE STATE
-The genetically encoded linguistic principles	The attained knowledge of language
-The Universal Grammar/ Language Acquisition Device	A (particular) mental grammar
-The innate linguistic endowment	The acquired/attained knowledge/grammar
-The (linguistic) genotype	The (linguistic) phenotype

Chomsky further makes a distinction with reference to the initial stage of the language faculty between innateness and specificity. The former refers to the genetic basis of language acquisition in the initial state of the language faculty; while the latter deals with a very distinct property of the mental faculty. This is shown by the following two questions about specificity and the language faculty: Is this faculty specific to the human species only? Is this faculty specific to the acquisition of language only?

The first question is related to species-specificity and Chomsky (1983) contends that the initial state of the language faculty is a species characteristic to only (and all) humans and is a property of the mind/brain. As for the language-specificity, Chomsky believes that the innate propensity of the initial state of the language faculty operates only for language acquisition and NOT for generalized learning mechanisms. Chomsky rejects the idea that language acquisition takes place in conjunction with the same 'general intelligence', multi-purpose learning strategies that are utilized in the

David Lehner

learning of non-linguistic matters like the rules of chemistry equations and formulas. With reference to this he postulates (1983:320):

There are, in fact, striking and obvious differences between language learning and the learning (or discovery) of physics. In the first case, a rich and complex system of rules and principles is attained in a uniform way, rapidly, effortlessly, on the basis of limited and rather degenerate evidence. In the second case, we are forced to proceed on the basis of consciously articulated principles subjected to careful verification with the intervention of individual insight and often genius.

It is clear enough that the cognitive domains in question are quite different. Humans are designed to learn a language, which is nothing other than what their minds construct when placed in appropriate conditions; they are not designed in anything like the same way to learn physics. Gross observations suffice to suggest that very different principles of 'learning are involved.'

Chomsky does not reject the idea that the language faculty and general learning mechanisms for non-linguistic matters may have some things in common. Nor does he deny that in some forms of language acquisition-e. g. vocabulary acquisition or adult SLA-that general learning mechanisms may not play a role. His skepticism is directed at these general learning mechanisms being accepted as a 'general learning theory'.

Chomsky contends that there exists a true ideal uniformity with reference to the initial state of the language faculty. That is, except for cases of pathology, all humans have basically the same uniformity in their initial states of the language faculty. Although some variation may exist Chomsky holds that it is so marginal that it can safely be ignored.

## THE PROCESS OF LANGUAGE ACQUISITION

The heading of this section, in a general manner of expression,

refers to the process by which the steady state of the language faculty is reached over the years on the basis of the genetically determined initial state.

Chomsky makes a distinction between growth or maturation and learning. He has noted that when we speak of organs of the body, we use the terms growth and maturation. Growth represents a process whereby an organ develops along a course, predetermined by genetic factors, to a final stage of maturity. The process of learning, although developmental, occurs as a result of association, induction, deduction, conditioning, hypothesis forming confirmation, abstraction and generalization. For Chomsky, these processes have 'no real significant role' in the acquisition of language although some have been provided certain types of lesser roles. Chomsky believes that the knowledge of language (i. e. grammar) develops in a child through genetically determined principles interacting with one's life experiences and exposure to linguistic data. In essence then, language acquisition is 'growth' not learning. He (1983:73) notes in this context that language acquisition may be the...

'...development of specialized hardware or of a specialized system that comes into operation, perhaps in the way in which sexual maturation takes place at a certain age for reasons that are probably deeply rooted in genetics, though naturally external conditions have to be appropriate.'

Pierce believes (See Chomsky, 1968) that abductive learning is a process by which the mind forms hypotheses according to some basic rules and selects the most highly evaluated one on the basis of evidence and other factors well. Consequently, in this view, language acquisition might be thought of as a process of abductive learning. Chomsky (1980b:14) states,

It is convenient sometimes to think of language acquisition in these terms, as if a mind equipped with universal grammar

David Lehner

generates alternative grammars that are tested against data of experience, with the most highly valued one selected.

However, Chomsky does not want this metaphoric allusion to abductive learning with respect to language acquisition to taken too seriously because, to him, whether knowledge of language is the result of abductive learning or growth is hardly worth considering at this point in time.

As Chomsky considers language acquisition to be a process of selective growth and maturation, he clarifies it at an abstract mental level as being parameter fixing rather than rule acquisition. Chomsky characterizes the genetically determined, initial state of the language faculty to be a system of fundamental principles, of which many still have open parameters. Consequently, he sees language acquisition as parameter fixing whereby children fix the values of open parameters to attain the (mental) grammar of their language.

To make the idea of language acquisition as parameter fixing easier to understand, Chomsky makes use of Higginbotham's (1983) analogy of the language faculty's initial state being an intricately structured system that is only partly 'wired up'. This system, according to Chomsky (1986:146),

is associated with a finite set of switches, each of which has a finite number of positions (perhaps two). Experience is required to set the switches. When they are set, the system functions. The transition from the initial state to the steady is a matter of setting the switches.

## THE NATURE OF KNOWLEDGE OF LANGUAGE

Chomsky contends that knowledge of language exists in the form of a specific mental state: the steady state of the language faculty. Chomsky (1980a:45) postulates that 'To know a language

is to be in a certain mental state, which persists as a relatively component of transitory mental states'. This mental character of language is clarified by a distinction between knowledge of language and the capacity to use a language. Chomsky has noted (1986:9) that though two people may share the same basic knowledge of language, they may differ greatly in their respective abilities to utilize it. He also contends that a person's ability to use a language may improve or decline but the actual knowledge he/she has about it will not improve or decline. He believes that the ability to use language may be impaired without a loss or deterioration in the actual knowledge itself. He (1980a:51) illustrates his stance as follows:

Imagine a person who knows English and suffers cerebral damage that does not affect the language centers at all but prevents their use in speech, comprehension, or let us suppose, even in thought. Suppose that the effects of the injury recede and with no further experience or exposure the person recovers the original capacity to use the language. In the intervening period, he had no capacity to speak or understand English, even in thought, though the mental (ultimately physical) structures that underlie that capacity were undamaged. Did the person know English during the intervening period?

Chomsky's contention is that the person did, indeed, 'know' English during the period of impairment but simply lacked the ability to demonstrate his knowledge because of physical disfunction. Consequently, knowledge of language is distinct from the ability to use it within Chomsky's notion of language.

Another closely related distinction in relation to knowledge of and use of language is found with respect to the creative use of language. Chomsky defines the creative use aspect of language to entail the ability to produce speech that is appropriate to novel situations and understanding when others are doing the same thing. Reality is a

'mystery' to Chomsky's mind and represents something that has no solution within existing approaches to the study of language. This reality is beyond the explanatory power that all linguistic approaches presently possess because it is concerned with such everlasting questions as 'free will' and choice and the ways in which the mechanisms of the mind are used creatively. Chomsky's study of the mind is restricted in scope: it only seeks to identify a subset of mind mechanisms and it does not attempt to answer the creative use of mind mechanisms. However, this does not mean that Chomsky feels this question to be uninteresting or unimportant. On the contrary, he believes that answers will come when a theory of sufficient explanatory power comes into being.

In order to avoid soci-political and other non-essential elements from his conceptualization of language, Chomsky makes reference to a distinction between an ideal speaker-hearer and an ordinary speaker-hearer. This 'ideal' speaker-hearer is: a) a member of a completely homogeneous speech community and b) knows his language perfectly. Of course, as all linguists know there is no completely homogeneous speech community and there are no speaker-hearers with 'perfect' knowledge of language. Chomsky is utilizing this idealization as a methodological tool that allows him to disregard the so-called common sense assumptions that interfere in the assigning of a coherent content to the notion of language. He is simply attempting to demonstrate that progress in answering the questions outlined at the outset of this paper would be impossible if these facts and considerations were included initially in the notion of 'language'. Chomsky (1986:116) notes that in making the simplifying idealization under discussion here he is perpetuating a modern tradition of linguistics and, moreover, is doing something that is normal in other sciences: 'In other scientific approaches the same assumption [about homogeneity] enters in one or another form,

explicitly or tacitly, in identification of the object of inquiry'. Therefore, it is obvious that Chomsky has an idealized notion of language. Numerous scholars have taken issue with Chomsky's 'search' for the ideal speaker-hearer, completely missing his point by taking it at its 'face value'.

A relatively new concept with respect to Chomsky's conceptualization of language takes form in the E (externalized) and I (internalized) language bifurcation. In simple terms, an E-language is an object that exists outside of the mind of the speaker.

Chomsky has discussed (1986:19) structural and descriptive linguistics and behavioral psychology as operating on the basis of considerations of E-language. In these approaches, language is viewed as a collection of utterances, actions, words, sentences and etc., all of which can be thought of as examples of forms or events. Any E-language grammar is a collection of descriptive statements concerning the language in question with regard to 'actual or potential speech events'. Botha (1989:69) states, 'A grammar may be selected in any way as long as it correctly identifies the E-language. If two grammars both correctly identify the E-language, that is if the two grammars are extensionally equivalent, it is senseless to argue that one is 'true' and the other 'false'.

Chomsky characterizes I-languages as those that depict 'some element of the mind of the person who knows the language, acquired by the learner, and used by the speaker-hearer'. Therefore, to Chomsky's way of thinking, an I-language is part of the speaker-hearer's mind, a mental object. In this connection, Chomsky utilizes Jespersen's view of language being a typical instance of the concept of I-language. Within such a view, there exists a 'notion' of structure within the speaker-hearer's mind and this notion is definite enough to guide him in his creation of novel sentences-i. e. those that are free and may be new to both the speaker and the listener. If



language is thought to be I-language, then a grammar would be a theory of the I-language and consequently, it might be true or it may be false.

Chomsky (1986:24) believes that the study of 'generative grammar' has shifted the focus of inquiry [from E-languages to I-languages. That is, 'from the study of language regarded as an externalized object to the study of the system of knowledge of language attained and internally represented in the mind/brain'. Consequently, an I-grammar represents a description of what a speaker-hearer knows when he knows a language. It is not a set of statements concerned with externalized objects.

This 'first conceptual shift' (Chomsky) associated with generative grammar has caused linguists to again face questions that deal with the nature, development and use of language as exemplified by Chomsky's approach to the study language.

Chomsky has also spent some time investigating a distinction between grammatical competence and pragmatic competence. In short, grammatical competence is a knowledge of form and meaning while pragmatic competence refers to a knowledge of conditions of appropriate usage. Chomsky calls grammatical competence a 'knowledge of grammar' and (1980a:59) offers the following more complete definition:

The cognitive state that encompasses all those aspects of form and meaning and their relation, including underlying structures that enter into that relation, which are properly assigned to the specific subsystems of the human mind that relates representations to form and meaning. A bit misleadingly perhaps, I will continue to call this subsystem the 'language faculty'.

Pragmatic competence lies in contradistinction to grammatical competence and is explained by Chomsky (1980a:224-5) as a:

system of rules and principles [that] ...determines how the

tool [of language] can effectively be put to use. Pragmatic competence may include what Paul Grice has called 'a logic of conversation'. We might say that pragmatic competence places language in the institutional setting of its use, relating intentions and purposes to the linguistic means at hand.

It is important to note that Chomsky's linguistics maintains that an I-language (or mental grammar) represents a speaker-hearer's grammatical competence or knowledge. Together with grammatical competence lies pragmatic competence and together they constitute important modules of knowledge of language.

With respect to the makeup of grammatical competence Chomsky discusses both core and periphery facets. This distinction is vital in light of his view that language acquisition is comprised of parameter setting. For Chomsky, the 'core' represents the essence of grammatical competence. He also refers to it as 'core grammar'. He explicates (1986:211),

The core...consists of the set of values selected for parameters of the core system of [the initial state of the language faculty]; this is the essential part of what is 'learned', if that is the correct term for this process of fixing knowledge of a particular language.

Previously, (1978a:12-13) Chomsky stated that the core could be thought of as having 'structures and rules of great simplicity' and also possessing:

a rigid structure which is limited in expressive devices. It incorporates principles of mental computation which interact to provide the basic skeleton on which language is constructed, yielding in fact the basic system of constructions and the great variety in interpreted expressions, though not the full wealth of the language.

With respect to the periphery, Chomsky maintains that it contains the 'marked exceptions' which are added on to the core on

the basis of specific linguistic experiences. Items found in the periphery, in Chomsky's idealization would include: irregular morphology, historical relics of earlier stages of the language, idioms, complex rules and borrowing. Chomsky has also pointed out (1981a:39; 1986:147) that the core is an idealized construct in relation to the system actually represented in the mind/brain of a speaker-hearer. He contends (1981:39) that,

A core grammar is what the language faculty would develop, as a component of the steady state, under empirical conditions that depart in certain respects from those of normal life, specifically, under conditions of homogeneity of linguistic experience.

Bearing a close relation to the above distinction between core and periphery is a further bifurcation between marked and unmarked rules. In simple terms, unmarked rules/structures are simpler, more highly constrained, more regular or more basic than marked structures and rules. Chomsky has further differentiated between three notions for markedness:

- 1) core vs. periphery
- 2) internal to the core
- 3) internal to the periphery

With respect to 1) above, the constituents of the core are unmarked while those of the periphery are marked. In 2) the parameters have been set in the absence of evidence. In 3) markedness has some sort of influence on the internal organization of the rules and structures which make up the periphery. All of these areas are most complex and space considerations do not allow for a discussion here. Suffice to say, that the concept of core vs. periphery and marked vs. unmarked are very important in Chomsky's notion of grammatical competence. Chomsky himself (1986: 147) notes that

The problem of formulating these notions precisely is an empirical

one throughout, although not a simple one, and many kinds of evidence might be relevant to determining them. For example, we would expect phenomena that belong to the periphery to be supported by specific evidence of sufficient 'density', to be variable among language and dialects...

### LANGUAGE USE

This brings us to the third of Chomsky's questions which deals with how language is put to use. In essence' Chomsky has dealt with three aspects of language use: the production of utterances; processing and interpretation of utterances; and the making of intuitive judgements about properties of utterances. Most of Chomsky's work has dealt with the first of these three aspects; he has been far more reticent about the other two. Chomsky considers that all three of these aspects are rule-guided.

With respect to the production of utterances, Chomsky makes a fundamental distinction between linguistic competence and linguistic performance. Competence represents 'knowledge of language' while performance is 'behavior' or 'the use of knowledge of language'. Though competence is presupposed for every instance of performance, there are other factors that Chomsky feels contribute to it. These would include such things as the speaker-hearer's memory capacity, his organizing mode or style, attention span and perceptual mechanisms etc.

Chomsky's classical formulation (1965:3-4) notes that performance is affected by grammatically irrelevant factors such as distractions, shifts of attention, interest and random and characteristic errors, slips of the tongue, hesitations, changes of planned discourse at midpoint and etc. Therefore, performance does not directly reflect real competence.

Chomsky does, however, realize that the linguist is constrained

David Lehner

in that he must use performance data in order to investigate competence. He notes (1980a:225)

Actual investigation of language necessarily deals with performance, and what someone does under specific circumstances. We often attempt to devise modes of inquiry that will reduce to a minimum factors that appear irrelevant to intrinsic competence, so that the data of performance will bear directly on competence, as the object of inquiry. To the extent that we have an explicit theory of competence, we can attempt to devise performance models to show how this knowledge is put to use.

### CONCLUSION

This paper has attempted to illustrate more clearly what Chomsky's linguistics is and what it isn't. It is certainly true that Chomsky has been attacked by many different scholars from a wide variety of angles. It is also not mistaken to say that many of the attacks against Chomsky are valid from differing points of view. However, in the opinion of this writer, far too many attacks against Chomsky are the reflection of a misunderstanding as to exactly what Chomsky is attempting to do. Many of the criticisms reflect the idea that Chomsky is trying to say that his ideas about language are presently able to answer all of the questions about language use, origin and makeup of the internal, mentalistic component as well as socio-linguistic factors. It is obvious to the mind of this writer that such expectations are unreasonable.

Chomsky has been striving to make linguistics into a 'true' science based upon the development of physics. Chomsky has narrowed his scope of inquiry in the hope that sound work in one smaller area will result in a base upon which more difficult questions may be dealt with in the future by other scholars. In short, Chomsky is not attempting to answer all of the complex, inter-twined questions encompassing all that makes up language acquisition (or

learning). He is only dealing with what it is that makes up a knowledge of language; how that knowledge is utilized; and how it arises in the mind brain. His approach to linguistics has always been transformational and generative. It has also always been changing in accordance with the advances he makes along the way. His ideas should not be confused with those of other scholars who propose things that Chomsky no longer contends are true. It must be remembered that, Chomsky's linguistics differs in important and fundamental ways from Chomskyan linguistics and consequently, any attacks made should be done only when the attacker is absolutely sure that he is attacking Chomsky's linguistics and not the ideas of another Chomskyan linguist. At the very least, attacks should be made only upon those guilty of offenses.

### BIBLIOGRAPHY

- Arnold, et. al. (1989) *ESSAYS ON GRAMMATICAL THEORY AND UNIVERSAL GRAMMAR* Clarendon Press-Oxford
- Botha, Rudolf. (1989) *CHALLENGING CHOMSKY* Basil Blackwell Press Ltd.
- Chomsky, N. (1957) *SYNTACTIC STRUCTURES* The Hague: Mouton
- Chomsky, N. (1965) *ASPECTS OF THE THEORY OF SYNTAX* Cambridge, Mass.: MIT Press
- Chomsky, N. (1972) *LANGUAGE AND MIND* New York: Harcourt Brace Javanovich
- Chomsky, N. (1975a) *REFLECTIONS ON LANGUAGE* New York: Pantheon Books
- Chomsky, N. (1978a) *A THEORY OF CORE GRAMMAR* *Glottol* 1, 7-26
- Chomsky, N. (1980a) *RULES AND REPRESENTATIONS* New York: Columbia University Press
- Chomsky, N. (1981a) *PRINCIPLES AND PARAMETERS IN SYNTACTIC THEORY* In Hornstein and Lightfoot (eds) 32-75
- Chomsky, N. (1981b) *LECTURES ON GOVERNMENT AND BINDING* Dordrecht: Foris Publications
- Chomsky, N. (1983) *ON COGNITIVE STRUCTURES AND THEIR DEVELOPMENT: A REPLY TO PIAGET* In Piatelli-Parmarini (ed)
- Chomsky, N. (1986) *KNOWLEDGE OF LANGUAGE: ITS NATURE, ORIGIN AND USE* New York: Praeger

David Lehner

- Chomsky, N. (1987) MIND AND LANGUAGE, 2, 178-197
- Chomsky, N. and Halle, M. (1968) THE SOUND PATTERN OF ENGLISH  
New York: Harper and Row
- Cook, V. J. (1988) CHOMSKY'S UNIVERSAL GRAMMAR Basil Blackwell-  
Oxford
- D'Agostino, F. (1986) CHOMSKY'S SYSTEM OF IDEAS Clarendon Press-  
Oxford
- George, A. (1989) REFLECTIONS ON CHOMSKY Basil Blackwell-Oxford
- Salkie, R. (1990) THE CHOMSKY UPDATE Unwin Hyman-London